

On the following day we crossed by the railway bridge to another island and hunted along the sides of the railway. People move freely along the railway lines here, and as there are only two trains each way in the day it is not a dangerous practice. *P. amanda* occurred again here but was too worn to keep, and a few worn *M. maturna* were also taken. On the railway bank, amongst other specimens, were a good many tiny specimens of *B. selene*, some not larger than *P. coridon* or a large *P. icarus* such as we found at Ryömälä. *P. aegon* occurred on the same ground. After a time Dr. and Mrs. Scott went off across the hill on a voyage of discovery, and found *P. apollo* in considerable numbers. In the afternoon they went a long expedition by boat to Punkaharju where they found *Pararge hiera* but too worn to be worth taking. Meanwhile I went across to one of the further islands, but only brought back four specimens, all however well worth the walk: they consisted of a ♀ *P. apollo*, a good ♀ *M. maturna* (all the others were worn) a specimen of *Argynnis niobe* ♂ and a light clay-coloured ♀ of *B. selene*, very fresh. On our last day I was unfortunately unable to leave my room, but Dr. and Mrs. Scott went to try and find specimens of *P. apollo* for me where they had taken them the previous day, but none were forthcoming.

(To be concluded.)

### Additional Records of Ants and Myrmecophiles in Britain since the 2nd edition of "British Ants" (1927) and my Paper on the Ants and Myrmecophiles of Windsor Forest (1930).

By HORACE DONISTHORPE, F.Z.S., F.R.E.S., etc.

#### (1) Additional Records:—

##### PONERINAE.

*PONERA COARCTATA*, Latr.

Devon, S.: Slapton Lea (*Donisthorpe*).

Glamorgan: Llandaff (*Hallett*).

##### MYRMICINAE.

*MONOMORIUM PHARAONIS*, L.

Kent, E.: Maidstone (*Frisby*).

*MYRMICA LAEVINODIS*, Nyl.

Berks: Windsor Forest (*Donisthorpe*).

Main Argyle: Bencruchan (*Waterston*).

*MYRMICA LAEVINODIS*, Nyl., var. *RUGINODO-LAEVINODIS*, Forel.

Shetland (*Squire*).

*MYRMICA RUGINODIS*, Nyl.

Monmouth: Trelleck (*Hallett*).

*MYRMICA SCABRINODIS*, Nyl.

Kincardineshire: Auchenblae Fordown (*Waterston*).

*MYRMICA SCABRINODIS*, Nyl. var. *SABULETI*, Mein.

Sussex, E.: Bexhill (C. O. *Waterhouse*), in Brit. Coll. B.M.

Berks: Windsor Forest (*Donisthorpe*).

*MYRMICA LOBICORNIS*, Nyl.

Westmoreland: Windermere, and Langdale (*Blair*).

Berks: Windsor Forest (*Donisthorpe*).

*MYRMICA SCHENCKI*, Emery.

Wicklow : South Strand, and Arklow (Stelfox).

Carlow : R. Slaney, Kilcarr Bridge (Stelfox).

*LEPTOTHORAX ACERVORUM*, F.Norfolk, W. : Lynn (*S. O. Taylor*).Monmouth : Trelleck (*Hallett*).Notts : Thoresby Park (*S. O. Taylor*).

Westmoreland : Ulleswater, and Foulshay (Blair).

Main Argyle : Ben Cruchan (Waterston).

*LEPTOTHORAX TUBERUM*, F. Devon, S. : Branscombe, nesting in stem of burdock (Blair).*TETRAMORIUM CAESPITUM*, L.Devon, S. : Hallsands (*Donisthorpe*).

Wexford : Ballyteige Burrows (Stelfox).

## FORMICINAE.

*ACANTHOMYOPS (DONISTHORPEA) NIGER*, L., var. *ALIENO-NIGER*, Forel.Berks : Windsor Forest (*Donisthorpe*).*ACANTHOMYOPS (DONISTHORPEA) ALIENUS*, Först.Berks : Windsor Forest (*Donisthorpe*).Down : Greencastle (*Johnson*).*ACANTHOMYOPS (DONISTHORPEA) BRUNNEUS*, Latr.Oxford : Oxford (*Richards*).*ACANTHOMYOPS (CHTHONOLASIVS) FLAVUS*, F.Westmorland : Haveley (Blair) ; Langdale Pikes (*Miss Longfield*).*ACANTHOMYOPS (CHTHONOLASIVS) UMBRATUS*, Nyl.Surrey : Putney (*Donisthorpe*).Berks : Windsor Forest (*Donisthorpe*).Cornwall S. : St. Ives and Carbis Bay (*Thornley*).*ACANTHOMYOPS (CHTHONOLASIVS) UMBRATUS*, Nyl., var. *MIXTO-UMBRATUS*, Forel.

Isle of Wight : Blackgang Chine, in Brit. Coll. B.M.

*ACANTHOMYOPS (CHTHONOLASIVS) MIXTUS*, Nyl.Berks : Windsor Forest (*Donisthorpe*).*FORMICA RUFA*, L.Gloucester, E. : Overly Woods near Cirencester, and Sapperton (*Wormersley*).*FORMICA RUFA*, L., var. *RUFO-PRATENSIS*, Forel.Monmouth : Trelleck (*Hallett*).*FORMICA SANGUINEA*, Latr.Monmouth : Trelleck (*Hallett*).*FORMICA FUSCA*, L., var., *GLEBARIA*, Nyl.Essex S. : Benfleet (*Donisthorpe*).*FORMICA FUSCA*, L. var. *RUBESCENS*, Forel.Middlesex : Hampstead (*Farren-White Coll. in B.M.*)

## INTRODUCED SPECIES :—

## PONERINAE.

*NEOPONERA THERESIAE*, Forel.

Aberdeen in banana store.

## MYRMICINAE.

*PHEIDOLE MEGACEPHALA*, F. Botanic Gardens, Cambridge.

*PHEIDOLE ANASTASII*, Embery. var. *CELLARUM*, Forel.

Cookbridge in Orchid farm (*Donisthorpe*); Botanic Gardens, Dublin (*Bullock*).

*SOLENOPTIS GEMINATA*, F.

Kew Gardens in numbers. Its first record for Britain. Habitat: S. America. One of the 11 species given by Forel as having become cosmopolitan.

*TRIGLYPHOTHRIX LANUGINOSA*, Mayr. York in numbers in Illepic nuts (*Britten*).

## DOLICHODERINAE.

*IRIDOMYRMEX HUMILIS*, Mayr.

Windsor, in hot houses, abundant (*Donisthorpe*); Cheltenham (*Taylor*); Exeter in house (*Rowley*).

## FORMICINAE.

*PARATRECHINA (NYLANDERIA) VIVIDULA*, Nyl.

Greenhouses at the Duffryn, Glamorgan (*Hallett*).

*PARATRECHINA (PARATRECHINA) LONGICORNIS*, Latr.

Tropical Gardens, Reading (*Hodson*).

*CAMPONOTUS (CAMPONOTUS) HERCULEANUS*, L. subsp. *PENNSYLVANICUS*, Retz.

The specimens recorded under this name in *British Ants*, p. 402, from Alfreton, Derbyshire = *C. (C.) LAEVIGATUS*, Smith.

*CAMPONOTUS (TANAEMYRMEX) BRITTENI*, Donis.

Liverpool, on one of Messrs. Bibbey Bros. Steamers, causing damage to the wood casing of the refrigerator chamber (*Britten*).

*CAMPONOTUS (TANAEMYRMEX) AETHIOPS*, Latr.

London, in hollow rhizome of orchid (*C. O. Waterhouse*) B. M. Coll.

*CAMPONOTUS (MYRMOTHRIX) BUGNIONI*, Forel.

Wye, Kent in Jamaican bananas (*Theobald*). The two specimens taken by Miss Tassart on apples Clapham Common and recorded in in *British Ants*, p. 404 as *C. (M.) ABDOMINALIS*, F., are really *C. (M.) bugnioni*.

*CAMPONOTUS (MYRMOTHRIX) ABDOMINALIS*, F.

Borough of Luton, in oranges. Eltham, Kent in bananas (*Channer*).

*CAMPONOTUS (MYRMOTHRIX) ABDOMINALIS*, F., var. *COSTARICENSIS*, Forel.

Cambridge in bananas.

*CAMPONOTUS (MYRMOTHRIX) ABDOMINALIS*, F. var. *ATRICEPS*, Smith.

Streatham in bananas (*Philpott*).

*CAMPONOTUS (MYRMOTHRIX) ABDOMINALIS*, F. subsp. *STERCORARIUS*, Forel.

London in West Indian bananas (*Miss F. Ede*): Oldham, Lancs. in bananas (*Stubbs*).

*CAMPONOTUS (MYRMOSPHINCTA) SEXGUTTATUS*, F.

London in bananas (*Scott-Elliot*): Romsey in bananas.

*CAMPONOTUS (MYRMOTREMA) GRANDIDIERI*, Forel subsp. *RUSPOLII*, Forel var. *ROLLEI*, Forel.

Stonehouse, Gloucester (*Farren-White*). In "Ants and their Ways" p. 53 (1884), Farren-White writes that he discovered some years back several representatives of a new species of ant in his own Vicarage.

He also mentioned that he found specimens in Smith's collection labelled "Stonehouse Vicarage" which he had given to the latter. I have found these specimens and have identified them as above. Now in introduced coll. B.M.

(2) New Windsor Forest Records :—

MYRMICINAE.

MYRMICA RUGINODIS, Nyl.

A large colony nesting in moss; the beetle *Othius myrmecophilus*, Kies., was also present in some numbers, 31.viii.32.

Marriage flights of several colonies in various parts of the Forest, 18.vii.33.

MYRMICA LAEVINODIS, Nyl.

A colony under stone; a number of deälated ♀ ♀ present, 26.iv.33. The first record for Windsor of this species.

MYRMICA SULCINODIS, Nyl.

A ♀ was taken on the wing 24.vii.31.

MYRMICA SCABRINODIS, Nyl.

A deälated ♀ found in a moor-hen's nest, 22.vi.31; a winged ♀ swept up, 22.x.31; marriage flights occurred 18.vii.33.

STENAMMA WESTWOODI, West.

A number of ♂ ♂ were found in "Cossus" frass in a hole in an oak tree, 16.vi.31; a ♂ was swept off grass 30.v.33.

LEPTOTHORAX ACERVORUM, F.

A ♂ was taken on the wing, 24.vii.31.

LEPTOTHORAX NYLANDERI, Först.

A colony was taken nesting under bark at the foot of an oak 13.vii.33. This was taken home and fixed up in an observation nest. No ants have died, and several ♂ ♂ are now present. A small colony was found nesting in a dead branch beaten off a lime tree, 24.viii.32.

FORMICIDAE.

ACANTHOMYOPS (DENDROLASIUS) FULIGINOSUS, Latr.

A ♀ was found with three wings, which she got rid of when put in a box, 18.viii.31. She was almost certainly fertilized, and was looking for a nest of *umbratus* to found her colony in.

ACANTHOMYOPS (DONISTHORPEA) NIGER, L.

A specimen of *Pezomachus instabilis*, Först. was taken running in company with *niger* ♂ ♂; superficially very like the ants.

A ♂ of the spider *Theridion bimaculatum*, L., was running over a *niger* nest 3.vii.32; it waved the legs about in a very ant like manner. Marriage flights occurred 18.vii.33.

ACANTHOMYOPS (DONISTHORPEA) NIGER, L. var. ALIENO-NIGER, Forel.

A number of ♂ ♂ were beaten off aspens, 15.viii.33. They were, no doubt, attending plant-lice. This is the first record of this variety for Windsor.

ACANTHOMYOPS (DONISTHORPEA) BRUNNEUS, Latr.

The Proctotrupids, *Callicerus myrmecarum*, K., 2 ♀ ♀, and *Conostigmus antennalis*, K., 1 ♂, were taken in a *brunneus* nest in an oak stump 27.vi.33. The *Conostigmus* is new to Britain. I am indebted to Mons. Ferrière for the names of these insects.

ACANTHOMYOPS (CHTHONOLASIUS) FLAVUS, F.

Marriage flights occurred on 18.vii.33.

ACANTHOMYOPS (CHTHONOLASIUS) UMBRATUS, Nyl.

The mite *Urodiscella ricasoliana*, Berl., 1 ♂ and several hypopi were found on the body of an *umbratus* ♀ in a nest of this ant in the base of a large dead oak, 24.viii.28.

Several deâlated ♀ ♀ were taken running on the ground with dead, and half dead *niger* ♀ ♀ in their jaws. This was after a marriage flight, and having got rid of their wings they had captured the *niger* ♀ ♀ preparatory to founding colonies in *niger* nests.

FORMICA RUFA, L.

A ♂ was taken by beating hawthorn blossoms, 19.v.33.

*Coccinella distincta*, was abundant on and near several *rufa* nests, 18.vii.33. This is a new record for Windsor Forest, and also for Berks.

Several specimens of *Ashuedopria sociata*, Kief. were taken in a *rufa* nest 15.ix.33.

FORMICA FUSCA, L.

A ♂ of the mite *Laelaps (Hypoaspis) myrmecophilus*, Berl., was taken in a *fusca* nest under a board 24.viii.33.

A specimen of the beetle *Atemeles emarginatus*, F., was taken in a small *fusca* nest at the roots of a stump, 17.vii.31.

A slowworm was seen in a *fusca* nest at the roots of a tree, 5.viii.31.

A winged ♀ was swept up, 10.x.31; a very late date.

A larva of *Atemeles emarginatus*, F., half grown, was found amongst the brood in a *fusca* nest under a sod containing a deâlated ♀, many ♀ ♀, eggs and young larvae, 16.viii.32.

FORMICA SANGUINEA, Latr.

A ♀ was taken on the wing, 24.vii.31.

Many *Sanguinea* ♀ ♀ very active from different colonies were running with cocoons in their jaws, 18.vii.33; slave raids must have taken place.

## The Early Stages of Indian Lepidoptera.

By D. G. SEVASTOPULO, F.R.E.S.

INTRODUCTION.—The more easily obtained books on Indian Lepidoptera are, I have found, of very little help in the identification of the early stages; a large number of the few descriptions appearing in Sir George Hampson's *Moths in the Fauna of British India* and in the Indo-Australian section of Seitz's *Macrolepidoptera of the World* are vague, incomplete and even inaccurate, whilst Evans, in his *Identification of Indian Butterflies*, ignores the early stages altogether.

I have, therefore, made a point of recording brief descriptions of the various larvae that have passed through my hands, in the hope that they may prove of use to other Entomologists working in India.

When numbering the somites I have in all cases ignored the head, the 1st somite is, therefore, the one immediately behind the head, *i.e.*, the first thoracic somite. Further, in spite of the fact that most of the descriptions are noted as being made from a single larva, they have all been checked with other examples, so that there is no danger of an